TreesPlease ®

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August 9, 2012

Mr. Robert Burris
VDOT
4975 Alliance Drive
Fairfax, VA 22030

Re: Great Falls white oak trees

Dear Robert:

At your request, I met you at the corner of Georgetown Pike and Walker Road on August 6th to make observations about two large white oak trees (*Quercus alba*). These were the only trees I examined during my visit. A resident joined us there; the recent fatality involving a tree failure nearby had renewed his long-standing concerns about the condition of these two trees. After discussing the situation, you and I agreed that I would perform a level two risk assessment[1] of the trees, and decide whether more advanced tests were justified.

Diagrams and annotated photographs are attached at the end of this report.

Both trees have significant decay[2] in their buttress roots[3]. Tree #1 has a fruiting body of the decay fungus *Inonotus dryadeus* at its base; I was able to probe about 24 inches into a cavity nearby; the trunk at that point is 55 inches in diameter. Sounding with a rubber mallet indicated that the decay associated with the cavity extends several feet up the tree from the base. Sounding also identified decay in a large exposed roots growing along Georgetown Pike. This tree has a scar from a fairly recent lightning strike; however,

[1] In a level two (or basic) risk assessment, a qualified arborist surveys the tree from the ground without using any invasive procedures.
[2] Decay is the process by which wood fiber becomes digested by fungi or bacteria.
[3] The large roots at the base of the tree's trunk, which normally flare out from the trunk and provide support and anchorage for the tree.

there is only slight decay from this. It also has large dead branches in its crown that would be considered an unacceptable risk. At the base I saw fine grain sawdust, which is evidence of bark beetle attacks; bark beetles are an indication of decline[4].

I am of the opinion that a whole tree failure of this tree is a moderate risk, and the tree probably would be viable for at least a few years. Since there is no effective treatment for decay, this risk will increase over time; it also would increase some if tree #2 were taken out. If it is kept, it should be pruned to reduce the hazard associated with the large dead wood. It also should be treated for borers; such treatments may or may not be effective. It also should be inspected on an annual basis and after strong storms.

Tree #2 leans slightly toward the intersection. On both the Georgetown Pike and Walker Road sides, the base of this tree has open wounds and obvious decay. Sounding with a rubber mallet indicates the presence of significant decay in a large exposed root that extends along Georgetown Pike. There is an area of the trunk on the Georgetown Pike side where the bark and cambium[5] have recently died; this lesion runs about six feet up the trunk from the base. The wood here is still solid, but is now open to decay. There are indications of borer[6] activity in this part of the tree trunk.

I am of the opinion that tree #2 is a greater risk to fall than is tree #1. The open wounds and obvious decay involve about half the base of this tree; this weakened tissue is on the underside of the lean of the tree, meaning it is the compression wood supporting the tree that has been compromised by decay. Once enough of this area is compromised, the tree will collapse; however, there is no way to know when this might occur. Therefore, this tree is a significant risk to fail and I am of the opinion that it should be removed.

Further testing could be done, using drill tests and/or tree radar, to collect data on the extent of the decay. I am not sure doing so would give us a better sense of the risk though.

If you have any questions, please give me a call.

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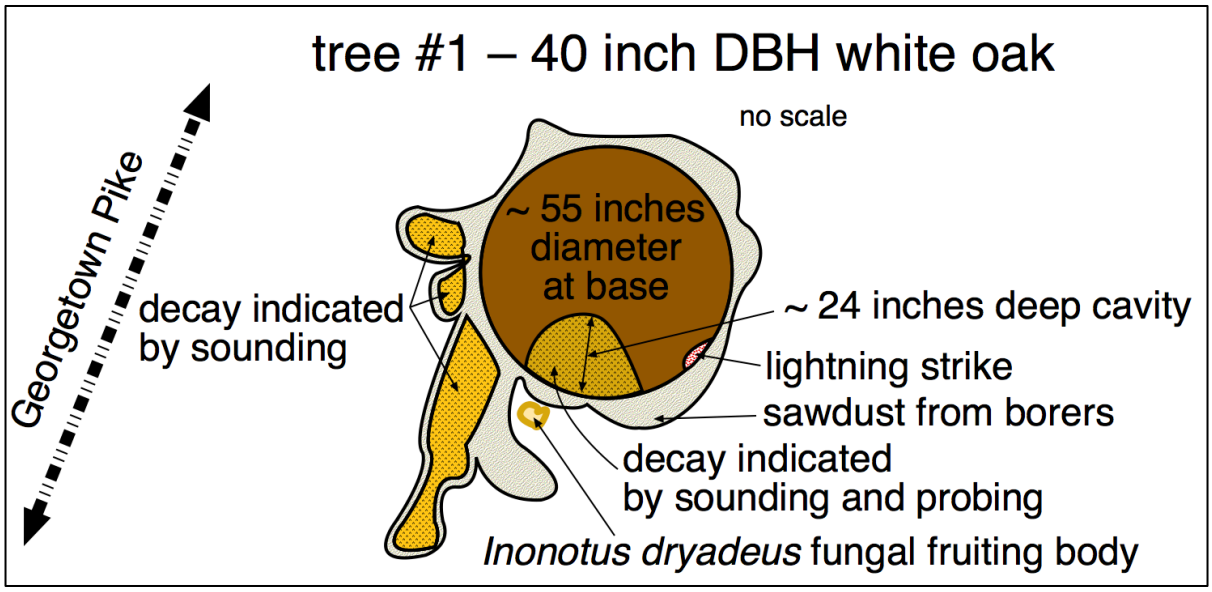
[4] Progressively decreasing health of part or all of a plant. Usually decline is caused by several interacting factors, such as drought, defoliation by insects and/or diseases, construction, etc.

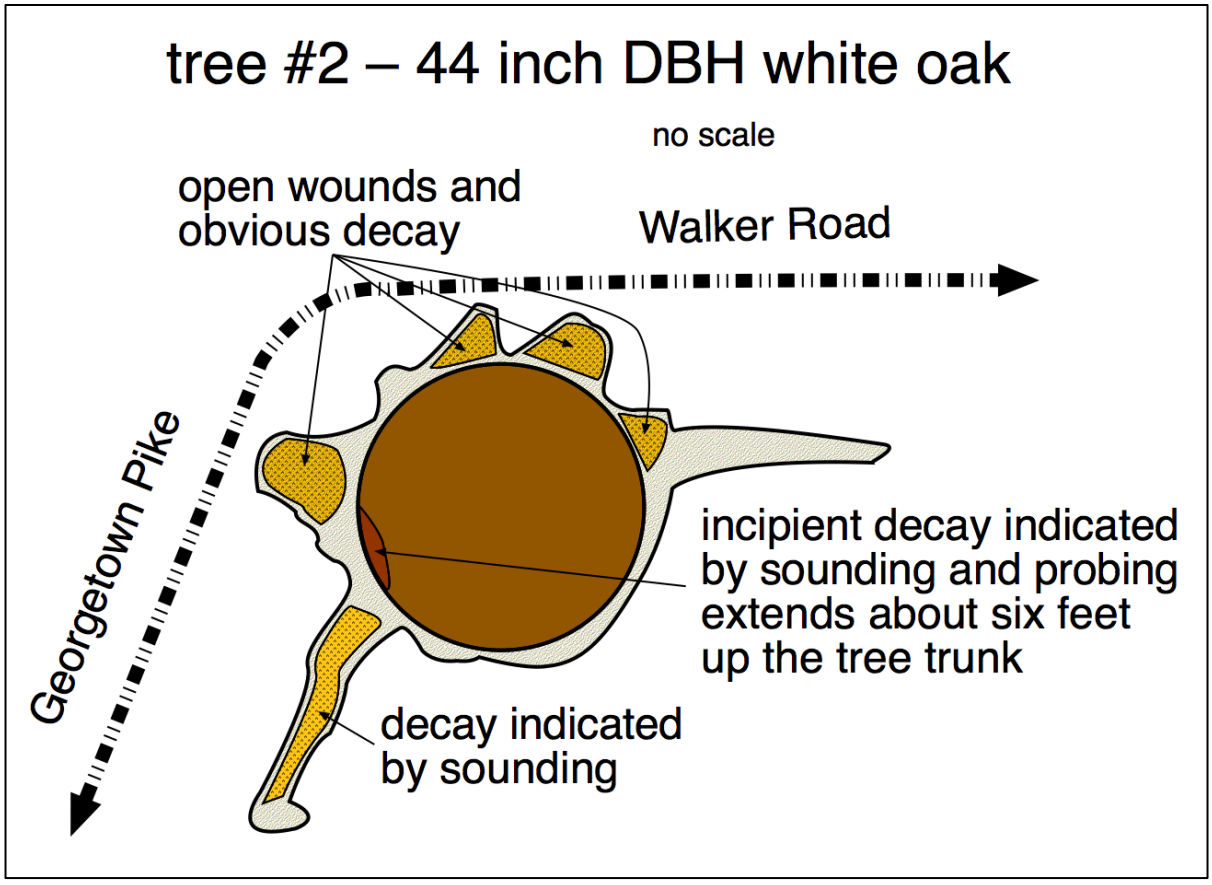
[5] Meristematic (capable of cell division and differentiation into various plant structures) tissue under the bark, which becomes phloem and xylem.

[6] A moth or beetle whose larval stage occurs under the bark or in the woody part of a plant; often indicate that a plant is stressed or in decline. Borers can be very difficult to treat effectively with pesticides, and control may ultimately depend on invigorating the plant.

Best wishes,

Ed Milhous
Registered Consulting Arborist® #350






tree #1
tree #2
Inonotus dryadeus
fungal fruiting body
lightning strike scar
sawdust from
bark beetles


dead tissue and incipient decay extending about six feet up the tree trunk
open wounds and obviously decayed wood on the street-corner side of tree #2
tree #1
tree #2